Patent Claims

- 1. Method for monitoring an oil and gas lubricating device (1), with which an oil film, while forming striae, can be conveyed by an airflow along a wall of a supply line (4) to a lubrication point (2), comprising the following process steps:
 - detecting the temporal change in the striae (12) by a striae sensor (14);
 - generating a striae signal that is representative for the temporal change in the striae (12);

characterised by the following process step:

- Smoothening of the striae signal by calculating an average value of the striae signal over a predetermined averaging interval.
- 2. Method according to Claim 1, characterised by the following process steps:
 - comparing the smoothened striae signal with a predetermined operating limit,
 which is representative for an oil film that is sufficient for lubrication point
 lubrication appropriate for operation;
 - Outputting an operating signal if the smoothened striae signal exceeds the operating limit.
- 3. Method according to Claim 1 or 2, characterised by the following process step:
 - Outputting a warning signal if the smoothened striae signal falls below the operating limit.
- 4. Method according to one of the abovementioned Claims, characterised by the following process steps:
 - comparing the smoothened striae signal with a predetermined warning limit, which
 is representative for an oil film that is not sufficient for lubrication point
 lubrication appropriate for operation;
 - outputting the warning signal if the smoothened striae signal falls below the warning limit.
- 5. Method according to one of the abovementioned Claims, characterised by the following process step:
 - Reading out the operating and / or warning limit from a memory unit (30).

- 6. Method according to one of the abovementioned Claims, characterised by the following process steps:
 - specifying the operating and / or warning limit depending on a normalization signal;
 - specifying the smoothed striae signal as an operating and / or warning limit when the normalization signal is applied.
- 7. Method according to one of the abovementioned Claims, characterised by the following process step:
 - specifying the operating or warning limit as a percentage or absolute deviation of the respective other limit.
- 8. Method according to one of the abovementioned Claims, characterised by the following process steps:
 - Automatic shortening of the averaging interval when the warning signal is being output;
 - specifying a long time interval and a short time interval.
- 9. Method according to one of the aforementioned Claims, characterised by the following process step:
 - generating the striae signal representative of the temporal change in the striae (12) using opto-electronic means.
- 10. Method according to one of the aforementioned Claims, characterised by the following process steps:
 - measuring the temperature of the oil film;
 - Saving the temperature of the oil film when specifying the operating or warning limit;
 - Smoothening the striae signal depending on the difference in the temperatures of the saved and measured temperature of the oil film.
- 11. Method according to Claim 10, characterised by the following process step:

- Adding and subtracting temperature-dependent characteristic values to or from the striae signal during the smoothening.
- 12. Method according to one of the aforementioned Claims, characterised by the following process steps:
 - comparing the unsmoothened striae signal with a predetermined malfunction limit that is representative for a striae signal when there is a malfunction in the airflow, during the smoothening;
 - outputting the warning signal if the unsmoothened striae signal falls below the malfunction limit.
- 13. Method according to one of the aforementioned Claims, characterised by the following process step:
 - Preconditioning of the striae signal before the smoothening by calculating an average value of the unsmoothened striae signal over a predetermined time interval.
- 14. Method according to one of the aforementioned Claims, characterised by the following process step:
 - Preconditioning of the striae signal before the smoothening by removing the constant portion from the unsmoothened striae signal.
- 15. Method according to one of the aforementioned Claims, characterised by the following process step:
 - Preconditioning of the striae signal before the smoothening by rectifying the unsmoothened striae signal.
- 16. Method according to one of the aforementioned Claims, characterised by the following process step:
 - amplifying the striae signal, depending on the preconditioned striae signal, to a predetermined average raw signal value.
- 17. Method according to Claim 16, characterised by the following process step:

- compensating the amplification of the raw signal value by attenuating the preconditioned striae signal.
- 18. Method according to one of the aforementioned Claims, characterised by the following process steps:
 - detecting a beam of light directed through the striae;
 - generating the striae signal depending on the beam of light.
- 19. Method according to one of the aforementioned Claims, characterised by the following process step:
 - generating the beam of light (15) directed through the striae by means of a light source (13).
- 20. Method according to Claim 17, characterised by the following process step:
 - calibrating the striae signal by regulating the light intensity of the light source (15).
- 21. Method according to Claim 17, characterised by the following process step:
 - calibrating the striae signal by regulating the light intensity of the light source (15) to a predetermined test intensity.
- 22. Method according to one of the aforementioned Claims, characterised by the following process step:
 - Filtering the raw striae signal by a filter (20).
- 23. Monitoring device for an oil and gas lubricating device, wherein with the oil and gas lubricating device, an oil film, while forming striae, can be conveyed by an airflow along a wall of a supply line (4) to a lubrication point (2), and the monitoring device is provided with a striae sensor (14), with which the temporal change in the striae (12) can be detected and a striae signal can be generated that is representative of the temporal change in the striae (12), characterised by a smoothening unit (28), by means of which the striae signal can be smoothened and an average value of the striae signal over a predetermined averaging interval can be calculated.

24. Monitoring device according to Claim 23, characterised in that the monitoring device includes a memory unit (30), from which an alterably storable operating and / or warning limit can be read during operation.